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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,799	01/21/2004	Ross Stenfort	ADAPP267	5404

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EXAMINER

SIDDIQUI, SAQIB JAVAID

ART UNIT PAPER NUMBER

2138

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/762,799	Applicant(s) STENFORT, ROSS	
	Examiner Saqib J. Siddiqui	Art Unit 2138	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

The Oath filed January 21, 2004 complies with all the requirements set forth in MPEP 602 and therefore is accepted.

Drawings

The filed drawings are accepted.

Specification

The contents of the filed specification are accepted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-24 are rejected under 35 U.S.C. 102 (e) as being fully anticipated by Wang et al. (hereinafter Wang) US PG Pub no. 20040268181 A1.

As per claim 1:

Wang teaches an apparatus for performing a boundary scan test, comprising an asynchronous flip-flop having a data input, a data output, a system clock input, a set input, and a reset input (Figure 7 "GSE"), and a test controller (Figure 5) having a test

clock input, a first test data output, and a second test data output, the first test data output being connected to the set input of the asynchronous flip-flop, the second test data output being connected to the reset input of the asynchronous flip-flop, the test controller being configured to control the asynchronous flip-flop through the set input and the reset input (Figure 8).

As per claim 2:

Wang teaches the apparatus as rejected in claim 1 above, wherein the test controller is configured to communicate with the asynchronous flip-flop without communicating through intervening multiplexing circuitry (Figure 8).

As per claim 3:

Wang teaches the apparatus as rejected in claim 1 above, wherein the test controller is configured to communicate directly with the asynchronous flip-flop (Figure 7).

As per claim 4:

Wang teaches the apparatus as rejected in claim 1 above, wherein the first test data output of the test controller is capable of asserting the set input of the asynchronous flip-flop, asserting the set input causing a high signal to be maintained by the asynchronous flip-flop (Figure 10A).

As per claim 5:

Wang teaches the apparatus as rejected in claim 1 above, wherein the second test data output of the test controller is capable of asserting the reset input of the

asynchronous flip-flop, asserting the reset input causing a low signal to be maintained by the asynchronous flip-flop (Figure 10E).

As per claim 6:

Wang teaches the apparatus as rejected in claim 1 above, wherein the set input is configured to dominate the reset input such that simultaneously asserting both the set input and the reset input causes a high signal to be maintained by the asynchronous flip-flop (paragraphs [0090-0099]).

As per claim 7:

Wang teaches the apparatus as rejected in claim 1 above, wherein the reset input is configured to dominate the set input such that simultaneously asserting both the set input and the reset input causes a low signal to be maintained by the asynchronous flip-flop (paragraphs [0090-0099]).

As per claim 8:

Wang teaches the apparatus as rejected in claim 1 above, wherein the asynchronous flip-flop is configured to transmit a signal received at the data input to the data output in accordance with the system clock input when both the set input and the reset input are not asserted (Figure 8).

As per claim 9:

Wang teaches the apparatus as rejected in claim 1 above, wherein the test controller is a test access port (TAP) controller compliant with an IEEE 1149.1 standard (Figure 3).

As per claim 10:

Wang teaches the apparatus as rejected in claim 9 above, wherein the first test data output is a test data in (TD1) pin of the TAP controller (Figure 3).

As per claim 11:

Wang teaches the apparatus as rejected in claim 9 above, wherein the second test data output is a test reset (TRST) pin of the TAP controller (Figure 3).

As per claims 12-14:

Claims 12-14 are directed to the apparatus of the apparatus of claims 1-11. Wang teaches as stated above, the apparatus as set forth in claims 1-11. Therefore, Wang also teaches as stated above, the apparatus as set forth in claims 12-14.

As per claims 15-17:

Claims 15-17 are directed to the method of integrating the apparatus of claims 1-11. Wang teaches as stated above, the apparatus as set forth in claims 1-11. Therefore, Wang also teaches as stated above, the method of integrating the apparatus as set forth in claims 15-17.

As per claims 18-24:

Claims 18-24 are directed to the method of operating the apparatus of claims 1-11. Wang teaches as stated above, the apparatus as set forth in claims 1-11. Therefore, Wang also teaches as stated above, the method of operating the apparatus as set forth in claims 18-24.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2138

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 12, 15 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable under in view of Qureshi US Pat no. 5,574,731.

As per claims 1, 12, 15 & 18:

Qureshi substantially teaches the apparatus and method of the claimed invention (Figure 3) except for it performs the same function with an added multiplexer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to omit the multiplexer from Qureshi's invention, since it has been held that omission of an element and its function in combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Related Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Additional pertinent prior art US Pat no. US 6813739 B1 mention

the same boundary scan test apparatus using asynchronous flip-flops is included herein for Applicant's review.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saqib J. Siddiqui whose telephone number is (571) 272-6553. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.


Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

SS
Saqib Siddiqui
Art Unit 2138
08/23/2006


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